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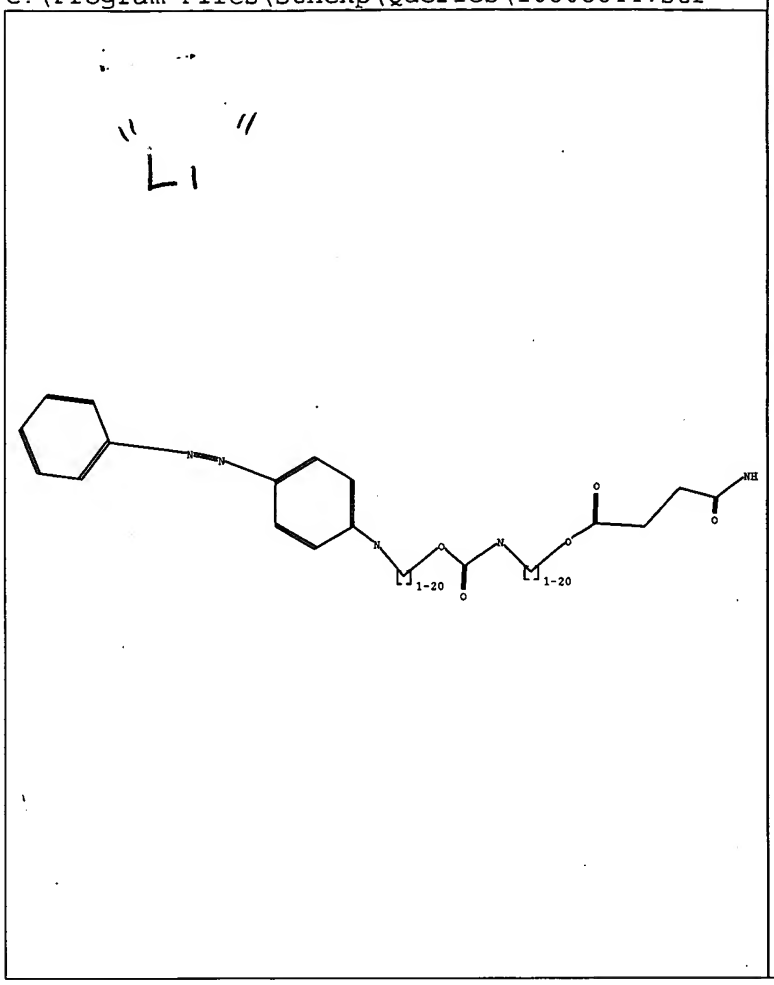
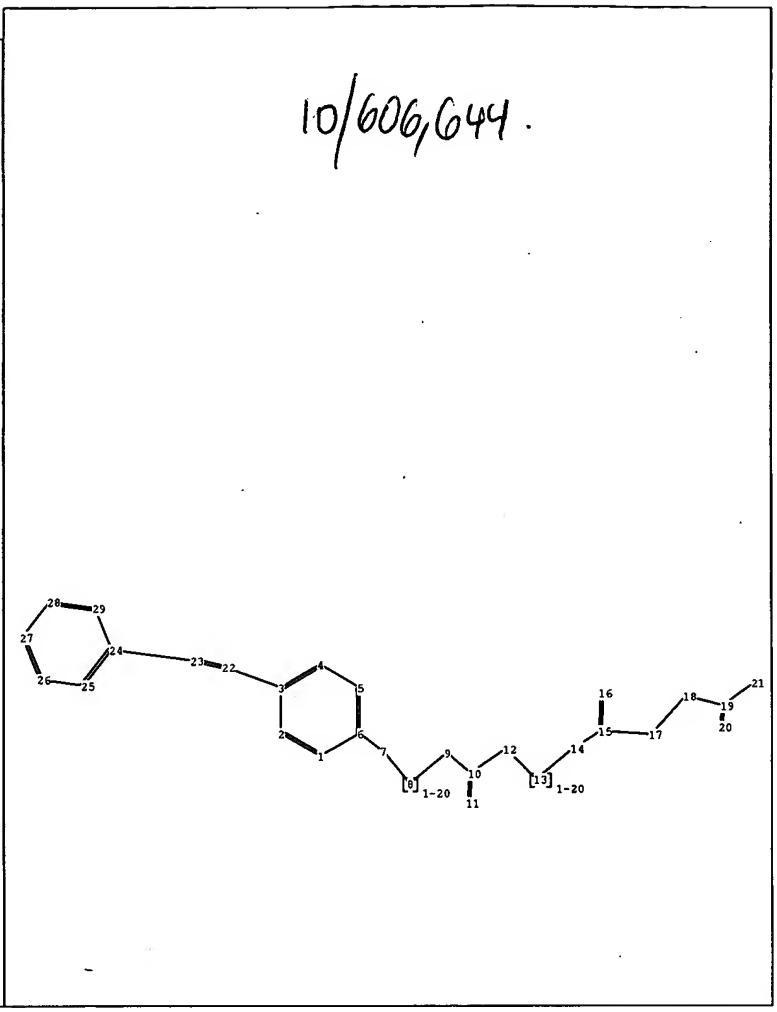


10/606,644.



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7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
ring nodes :
1 2 3 4 5 6 24 25 26 27 28 29
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3-22 6-7 7-8 8-9 9-10 10-11 10-12 12-13 13-14 14-15 15-16 15-17 17-18 18-19
19-20 19-21 22-23 23-24
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 24-25 24-29 25-26 26-27 27-28 28-29
exact/norm bonds :
3-22 6-7 7-8 8-9 9-10 10-11 10-12 12-13 13-14 14-15 15-16 19-20 19-21 22-23
23-24
exact bonds :
15-17 17-18 18-19
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 24-25 24-29 25-26 26-27 27-28 28-29

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom
29:Atom

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FILE 'HOME' ENTERED AT 09:51:39 ON 07 JUL 2005

=> file reg
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.21       0.21

FILE 'REGISTRY' ENTERED AT 09:51:50 ON 07 JUL 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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provided by InfoChem.

STRUCTURE FILE UPDATES:     6 JUL 2005  HIGHEST RN 853990-77-9
DICTIONARY FILE UPDATES:    6 JUL 2005  HIGHEST RN 853990-77-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

*********************************************************************
*                                                                   *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005.  A new display format, IDERL, is now    *
* available and contains the CA role and document type information. *
*                                                                   *
*********************************************************************

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

*** YOU HAVE NEW MAIL ***

=>
Uploading C:\Program Files\Stnexp\Queries\10606644.str


=>
=> d his

     (FILE 'HOME' ENTERED AT 09:51:39 ON 07 JUL 2005)

     FILE 'REGISTRY' ENTERED AT 09:51:50 ON 07 JUL 2005

=> s l1 full
L1 NOT FOUND
The L-number entered has not been defined in this session, or it
has been deleted.  To see the L-numbers currently defined in this
session, enter DISPLAY HISTORY at an arrow prompt (=>).

=> file reg
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.86       1.07

FILE 'REGISTRY' ENTERED AT 09:52:53 ON 07 JUL 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 6 JUL 2005 HIGHEST RN 853990-77-9
DICTIONARY FILE UPDATES: 6 JUL 2005 HIGHEST RN 853990-77-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

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*                                                                    *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,    *
* effective March 20, 2005.  A new display format, IDERL, is now     *
* available and contains the CA role and document type information. *
*                                                                    *
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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

*** YOU HAVE NEW MAIL ***

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Uploading C:\Program Files\Stnexp\Queries\10606644.str

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=> s l1 full
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FULL SCREEN SEARCH COMPLETED - 13 TO ITERATE

100.0% PROCESSED 13 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L2 0 SEA SSS FUL L1

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L1 STR
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Structure attributes must be viewed using STN Express query preparation.

=>

=>
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L3 STRUCTURE UPLOADED

=> d l3
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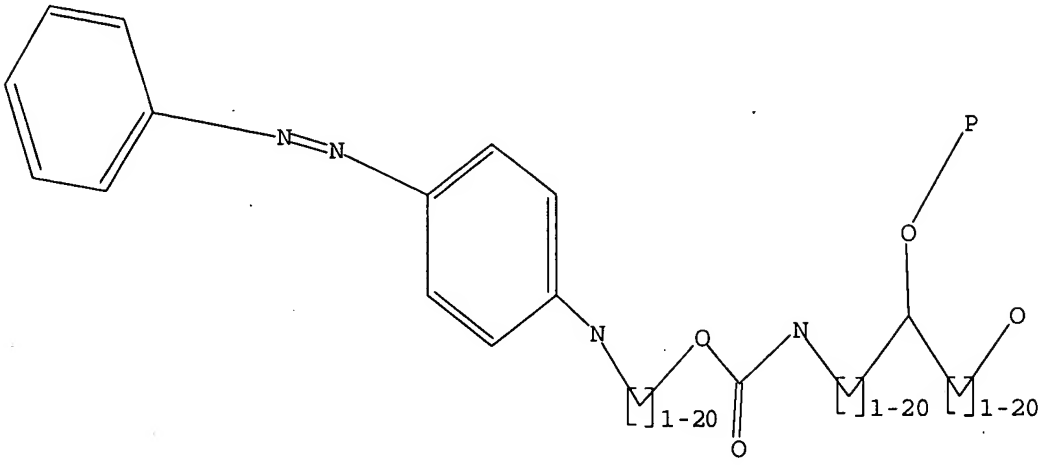
L3 STR



Structure attributes must be viewed using STN Express query preparation.

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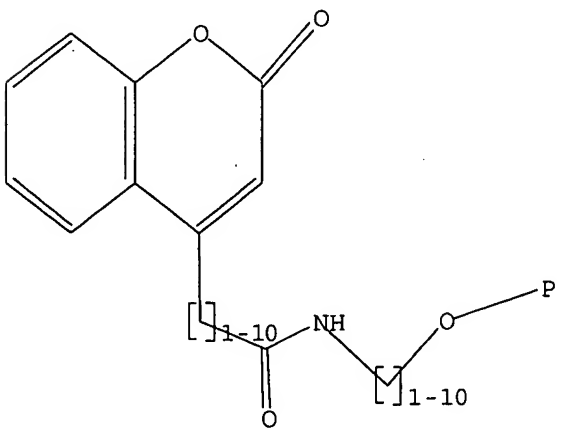
100.0% PROCESSED 1 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L4 0 SEA SSS FUL L3

=>
Uploading C:\Program Files\Stnexp\Queries\106066443.str

L5 STRUCTURE UPLOADED

=> d l5
L5 HAS NO ANSWERS
L5 STR



Structure attributes must be viewed using STN Express query preparation.

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FULL SCREEN SEARCH COMPLETED -      38 TO ITERATE

100.0% PROCESSED       38 ITERATIONS                              3 ANSWERS
SEARCH TIME: 00.00.01

L6             3 SEA SSS FUL L5

=> file caplus
COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   489.58     490.65

FILE 'CAPLUS' ENTERED AT 10:02:33 ON 07 JUL 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 7 Jul 2005  VOL 143 ISS 2
FILE LAST UPDATED: 6 Jul 2005  (20050706/ED)

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  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

=> s 16
L7             5 L6

=> dup rem l7
PROCESSING COMPLETED FOR L7
L8             5 DUP REM L7 (0 DUPLICATES REMOVED)

=> d 18 bib abs hitstr 1-5

L8   ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2005 ACS on STN
AN   2003:608715  CAPLUS
DN   139:273087
TI   Fluorescence energy transfer reveals microdomain formation at
     physiological temperatures in lipid mixtures modeling the outer leaflet of
     the plasma membrane
AU   Silvius, John R.
CS   Department of Biochemistry, McGill University, Montreal, QC, H3G 1Y6, Can.
SO   Biophysical Journal (2003), 85(2), 1034-1045
     CODEN: BIOJAU; ISSN: 0006-3495
PB   Biophysical Society
DT   Journal
LA   English
AB   An approach is described using fluorescence resonance energy transfer
     (FRET) to detect inhomogeneity in lipid organization, on distance scales
     of the order of tens of nanometers or greater, in lipid bilayers.  This
     approach compares the efficiency of energy transfer between two matched
     fluorescent lipid donors, differing in their affinities for ordered vs.
     disordered regions of the bilayer, and an acceptor lipid that distributes
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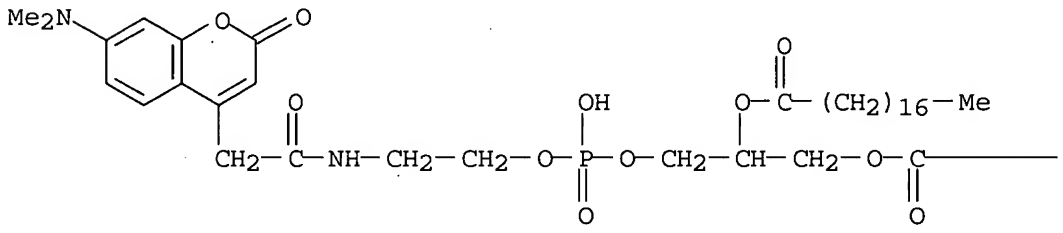
preferentially into disordered regions. Inhomogeneities in bilayer organization, on spatial scales of tens of nanometers or greater, are detected as a marked difference in the efficiencies of quenching of fluorescence of the two donor species by the acceptor. Using a novel pair of 7-nitrobenz-2-oxa-1,3-diazol-4-yl (NBD)-labeled tetraacyl lipids as donor species with a rhodaminyl-labeled acceptor, this strategy faithfully reports homo- vs. inhomogeneous mixing in each of several lipid bilayer systems whose organization on the FRET distance scale can be predicted from previous findings. Interestingly, however, the present FRET method reports clear evidence of inhomogeneity in the organization of mixts. combining sphingomyelin or saturated phospholipids with unsatd. phospholipids and physiol. proportions of cholesterol, even at physiol. temps. where these systems have been reported to appear homogeneous by fluorescence microscopy. These results indicate that under physiol. conditions, lipid mixts. mimicking the lipid composition of the outer leaflet of the plasma membrane can form domains on a spatial scale comparable to that inferred for the dimensions of lipid rafts in biol. membranes.

IT **606249-22-3**
RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(fluorescence energy transfer reveals microdomain formation at physiol. temps. in lipid mixts. modeling the outer leaflet of plasma membrane)

RN 606249-22-3 CAPLUS

CN Octadecanoic acid, 1-[9-[7-(dimethylamino)-2-oxo-2H-1-benzopyran-4-yl]-3-hydroxy-3-oxido-8-oxo-2,4-dioxa-7-aza-3-phosphanon-1-yl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

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RE.CNT 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:946512 CAPLUS
DN 138:20449
TI Oligonucleotide probes containing fluorophores, quenchers, and minor groove binders and their use in hybridization assays
IN Reed, Michael W.; Lukhtanov, Eugeny Alexander; Gall, Alexander A.; Dempcy, Robert O.; Vermeulen, Nicolaas M. J.
PA Epoch Biosciences, Inc., USA
SO PCT Int. Appl., 134 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002099141	A1	20021212	WO 2002-US17787	20020605
	WO 2002099141	C2	20040527		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US	2002034754	A1	20020321	US 2001-876830	20010606
US	6790945	B2	20040914		
US	2003096254	A1	20030522	US 2002-113445	20020329
US	2004081959	A9	20040429		
EP	1430147	A1	20040623	EP 2002-737392	20020605

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRAI	US 2001-876830	A	20010606
	US 2002-113445	A	20020329
	US 1999-457616	A2	19991208
	WO 2002-US17787	W	20020605

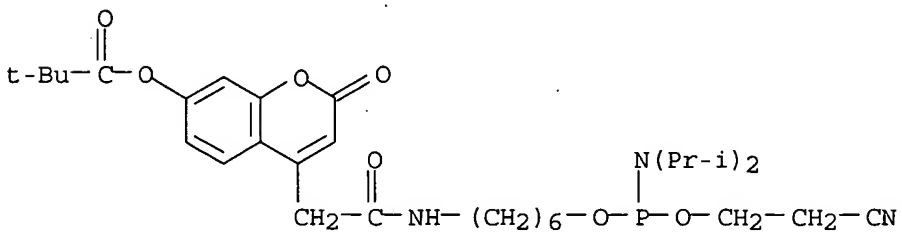
OS MARPAT 138:20449

AB Fluorogenic oligonucleotide probes with quencher structures are provided for use in hybridization assays. The probes also can contain a minor groove binder. Methods and reagents for synthesizing such probes are provided. Thus, oligonucleotides containing fluorescein or TAMRA fluorophore, DABCYL, resorufin, coumarin, Red 1, or Red 13 quencher, and a minor groove binder were synthesized and characterized. Two such probes were used in a PCR assay for detection of a SNP in the RRM1 gene.

IT **344436-45-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(oligonucleotide probes containing fluorophores, quenchers, and minor groove binders and their use in hybridization assays)

RN 344436-45-9 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 4-[11-[bis(1-methylethyl)amino]-14-cyano-2-oxo-10,12-dioxa-3-aza-11-phosphatetradec-1-yl]-2-oxo-2H-1-benzopyran-7-yl ester (9CI) (CA INDEX NAME)

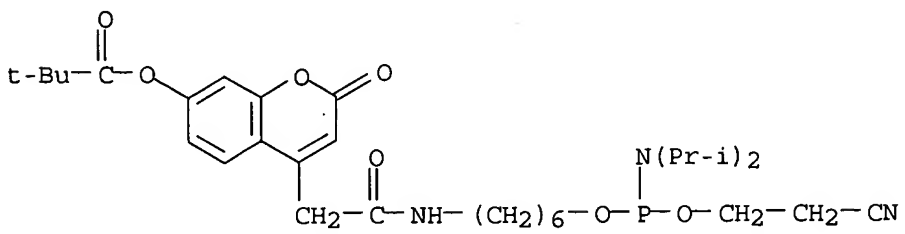


RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:221154 CAPLUS
DN 136:258286
TI Oligonucleotide-quencher-fluorescent dye conjugates and their use in nucleic acid hybridization
IN Reed, Michael W.; Lukhtanov, Eugeny Alexander; Gall, Alexander A.; Dempcy, Robert O.; Vermeulen, Nicolaas M. J.
PA Epoch Biosciences, Inc., USA
SO U.S. Pat. Appl. Publ., 63 pp., Cont.-in-part of U. S. Ser. No. 457,616.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 5

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI US 2002034754 A1 20020321 US 2001-876830 20010606
US 6790945 B2 20040914
US 6727356 B1 20040427 US 1999-457616 19991208
US 2003008304 A1 20030109 US 2002-84818 20020226
US 6653473 B2 20031125
US 2002155484 A1 20021024 US 2002-93769 20020307
US 6699975 B2 20040302
US 2003096254 A1 20030522 US 2002-113445 20020329
US 2004081959 A9 20040429
WO 2002099141 A1 20021212 WO 2002-US17787 20020605
WO 2002099141 C2 20040527
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
EP 1430147 A1 20040623 EP 2002-737392 20020605
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
US 2003175728 A1 20030918 US 2002-165410 20020606
US 2004191796 A1 20040930 US 2003-606644 20030625
PRAI US 1999-457616 A2 19991208
US 2001-876830 A3 20010606
US 2001-302137P P 20010629
US 2002-351637P P 20020123
US 2002-93769 A3 20020307
US 2002-113445 A 20020329
WO 2002-US17787 W 20020605
OS MARPAT 136:258286
AB The invention relates to oligonucleotide-quencher-fluorescent dye conjugates having improved characteristics, and to reagents suitable for incorporating novel quencher and fluorescent dye moieties into oligonucleotides. The invention also related to the use of oligonucleotide-quencher-fluorescent dye conjugates in detection methods for nucleic acid targets. Thus, a 14-nucleotide probe having a fluorescein moiety at the 5'-terminal and a minor groove binder and phenylazophenyl derivative at the 3'-terminus was prepared and used in SNP detection of RRM1 alleles by PCR.
IT **344436-45-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(oligonucleotide-quencher-fluorescent dye conjugates and their use in nucleic acid hybridization)
RN 344436-45-9 CAPLUS
CN Propanoic acid, 2,2-dimethyl-, 4-[11-[bis(1-methylethyl)amino]-14-cyano-2-oxo-10,12-dioxa-3-aza-11-phosphatetradec-1-yl]-2-oxo-2H-1-benzopyran-7-yl ester (9CI) (CA INDEX NAME)



RE.CNT 104 THERE ARE 104 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:435306 CAPLUS
DN 135:41772
TI Fluorophore-oligonucleotide-4-(phenyldiazenyl)phenylamine quencher conjugates for use in hybridization assays
IN Reed, Michael W.; Lukhtanov, Eugeny Alexander; Gall, Alexander A.; Dempcy, Robert O.
PA Epoch Biosciences, Inc., USA
SO PCT Int. Appl., 122 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001042505	A2	20010614	WO 2000-US33333	20001208
	WO 2001042505	A3	20020124		
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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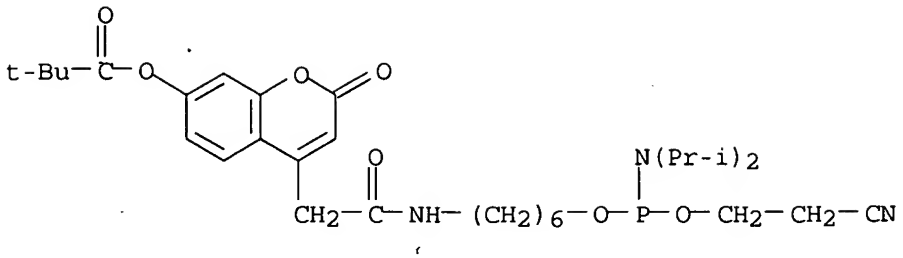
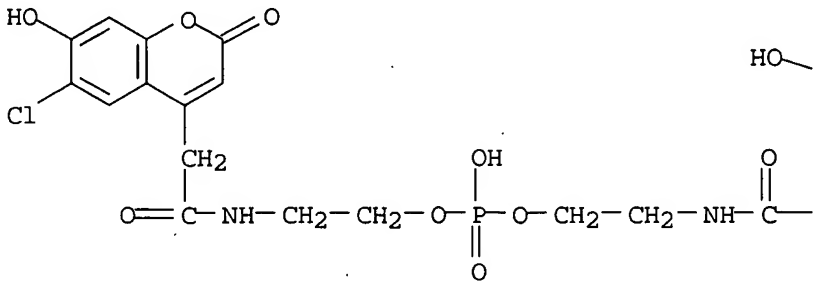
	CA 2396795	AA	20010614	CA 2000-2396795	20001208
	EP 1235938	A2	20020904	EP 2000-984069	20001208
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003516163	T2	20030513	JP 2001-544376	20001208
	US 2002155484	A1	20021024	US 2002-93769	20020307
	US 6699975	B2	20040302		
	US 2004191796	A1	20040930	US 2003-606644	20030625
PRAI	US 1999-457616	A	19991208		
	WO 2000-US33333	W	20001208		
	US 2002-93769	A3	20020307		

OS MARPAT 135:41772
AB Oligonucleotide-fluorophore-quencher conjugates wherein the fluorophore moiety has emission wavelengths in the range of about (300) to about (800) nm, and or where the quencher includes a substituted 4-(phenyldiazenyl)phenylamine structure provide improved signal to noise ratios and other advantageous characteristics in hybridization and related assays. The oligonucleotide-fluorophore-quencher conjugates can be synthesized by utilizing novel phosphoramidite reagents that incorporate the quencher moiety based on the substituted 4-(phenyldiazenyl)phenylamine structure, and or novel phosphoramidite reagents that incorporate a fluorophore moiety based on the substituted coumarin, substituted 7-hydroxy-3H-phenoxazin-3-one, or substituted 5,10-dihydro-10-[phenyl]pyrido[2,3-d;6,5-d']dipyrimidine-2,4,6,8-(1H,3H,7H,9H,10H)-tetrone structure. Oligonucleotide-fluorophore-quencher-minor groove binder conjugates including a pyrrolo[4,5-e]indolin-7-yl-carbonyl{pyrrolo[4,5-e]indolin-7-yl}carbonyl pyrrolo[,5-e]indoline-7-carboxylate (DPI3) moiety as the minor groove binder and the substituted 4-(phenyldiazenyl)phenylamine moiety as the quencher, were synthesized and have substantially improved hybridization and signal to noise ratio properties.
IT **344436-45-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(fluorophore-oligonucleotide-4-(phenyldiazenyl)phenylamine quencher conjugates for use in hybridization assays)
RN 344436-45-9 CAPLUS
CN Propanoic acid, 2,2-dimethyl-, 4-[11-[bis(1-methylethyl)amino]-14-cyano-2-oxo-10,12-dioxa-3-aza-11-phosphatetradec-1-yl]-2-oxo-2H-1-benzopyran-7-yl ester (9CI) (CA INDEX NAME)

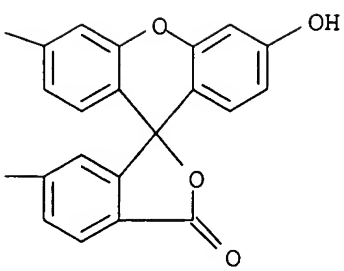


L8 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:97630 CAPLUS
DN 134:112553
TI Design and synthesis of intramolecular resonance-energy transfer probes for use in ratiometric measurements in aqueous solution
AU Kawanishi, Yasutomo; Kikuchi, Kazuya; Takakusa, Hideo; Mizukami, Shin; Urano, Yasuteru; Higuchi, Tsunehiko; Nagano, Tetsuo
CS Grad. Sch. Pharm. Sci., Univ. Tokyo, Tokyo, 113-0033, Japan
SO Angewandte Chemie, International Edition (2000), 39(19), 3438-3440
CODEN: ACIEF5; ISSN: 1433-7851
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
AB Herein, we present a method to observe the emission of the acceptor caused by intramol. resonance energy transfer (RET), applicable for ratiometric measurements in aqueous solution This method is based upon the idea that self-quenching between the two fluorophores can be blocked and the emission of the acceptor can be observed by restricting the flexibility of the linker between the two fluorophores, so that they can not readily come into close contact.
IT **321427-62-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(CPF1; design and synthesis of intramol. resonance-energy transfer probes for use in ratiometric measurements in aqueous solution)
RN 321427-62-7 CAPLUS
CN Phosphoric acid, mono[2-[[(6-chloro-7-hydroxy-2-oxo-2H-1-benzopyran-4-yl)acetyl]amino]ethyl] mono[2-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-6-yl)carbonyl]amino]ethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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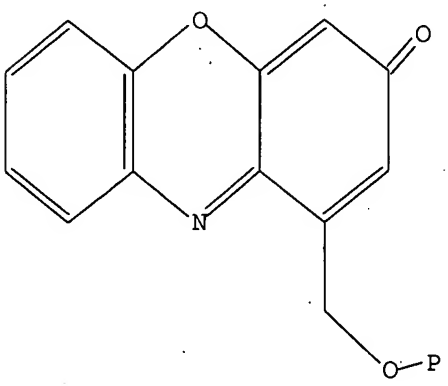
L9 STRUCTURE UPLOADED

=> d l9
L9 HAS NO ANSWERS
L9 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l9 full
REGISTRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 10:06:17 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 277 TO ITERATE

100.0% PROCESSED 277 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L10 0 SEA SSS FUL L9

L11 0 L10

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Uploading C:\Program Files\Stnexp\Queries\106066445.str

L14 STRUCTURE UPLOADED

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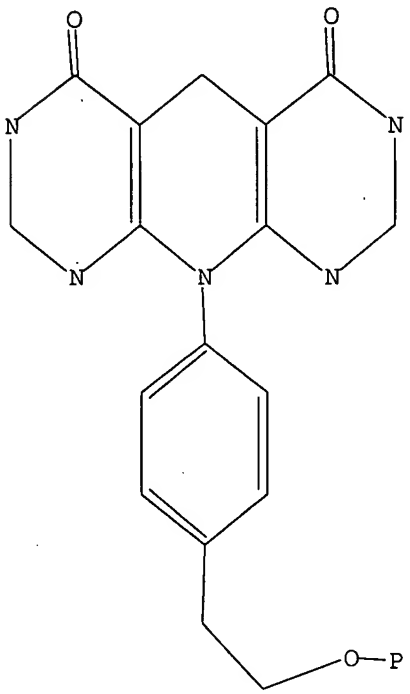
L14 HAS NO ANSWERS
L14 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l14 full
REGISTRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 10:09:30 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 333 TO ITERATE

100.0% PROCESSED 333 ITERATIONS 2 ANSWERS
SEARCH TIME: 00.00.01

L15 2 SEA SSS FUL L14

L16 3 L15

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.45	1005.19

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION

CA SUBSCRIBER PRICE 0.00 -3.65

FILE 'CAPLUS' ENTERED AT 10:09:37 ON 07 JUL 2005
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FILE COVERS 1907 - 7 Jul 2005 VOL 143 ISS 2
FILE LAST UPDATED: 6 Jul 2005 (20050706/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

*** YOU HAVE NEW MAIL ***

=> s l16
L17 3 L15

=> dup rem l17
PROCESSING COMPLETED FOR L17
L18 3 DUP REM L17 (0 DUPLICATES REMOVED)

=> d l18 bib abs 1-3

L18 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:946512 CAPLUS
DN 138:20449
TI Oligonucleotide probes containing fluorophores, quenchers, and minor groove binders and their use in hybridization assays
IN Reed, Michael W.; Lukhtanov, Eugeny Alexander; Gall, Alexander A.; Dempcy, Robert O.; Vermeulen, Nicolaas M. J.
PA Epoch Biosciences, Inc., USA
SO PCT Int. Appl., 134 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002099141	A1	20021212	WO 2002-US17787	20020605
	WO 2002099141	C2	20040527		
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2002034754	A1	20020321	US 2001-876830	20010606
	US 6790945	B2	20040914		
	US 2003096254	A1	20030522	US 2002-113445	20020329
	US 2004081959	A9	20040429		

EP 1430147 A1 20040623 EP 2002-737392 20020605
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRAI US 2001-876830 A 20010606
US 2002-113445 A 20020329
US 1999-457616 A2 19991208
WO 2002-US17787 W 20020605
OS MARPAT 138:20449
AB Fluorogenic oligonucleotide probes with quencher structures are provided for use in hybridization assays. The probes also can contain a minor groove binder. Methods and reagents for synthesizing such probes are provided. Thus, oligonucleotides containing fluorescein or TAMRA fluorophore, DABCYL, resorufin, coumarin, Red 1, or Red 13 quencher, and a minor groove binder were synthesized and characterized. Two such probes were used in a PCR assay for detection of a SNP in the RRM1 gene.
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:221154 CAPLUS
DN 136:258286
TI Oligonucleotide-quencher-fluorescent dye conjugates and their use in nucleic acid hybridization
IN Reed, Michael W.; Lukhtanov, Eugeny Alexander; Gall, Alexander A.; Dempcy, Robert O.; Vermeulen, Nicolaas M. J.
PA Epoch Biosciences, Inc., USA
SO U.S. Pat. Appl. Publ., 63 pp., Cont.-in-part of U. S. Ser. No. 457,616.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 5

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002034754	A1	20020321	US 2001-876830	20010606
US 6790945	B2	20040914		
US 6727356	B1	20040427	US 1999-457616	19991208
US 2003008304	A1	20030109	US 2002-84818	20020226
US 6653473	B2	20031125		
US 2002155484	A1	20021024	US 2002-93769	20020307
US 6699975	B2	20040302		
US 2003096254	A1	20030522	US 2002-113445	20020329
US 2004081959	A9	20040429		
WO 2002099141	A1	20021212	WO 2002-US17787	20020605
WO 2002099141	C2	20040527		
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1430147	A1	20040623	EP 2002-737392	20020605
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003175728	A1	20030918	US 2002-165410	20020606
US 2004191796	A1	20040930	US 2003-606644	20030625
PRAI US 1999-457616	A2	19991208		
US 2001-876830	A3	20010606		
US 2001-302137P	P	20010629		
US 2002-351637P	P	20020123		
US 2002-93769	A3	20020307		
US 2002-113445	A	20020329		
WO 2002-US17787	W	20020605		

OS MARPAT 136:258286
AB The invention relates to oligonucleotide-quencher-fluorescent dye

conjugates having improved characteristics, and to reagents suitable for incorporating novel quencher and fluorescent dye moieties into oligonucleotides. The invention also related to the use of oligonucleotide-quencher-fluorescent dye conjugates in detection methods for nucleic acid targets. Thus, a 14-nucleotide probe having a fluorescein moiety at the 5'-terminal and a minor groove binder and phenylazophenyl derivative at the 3'-terminus was prepared and used in SNP detection of RRM1 alleles by PCR.

RE.CNT 104 THERE ARE 104 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:435306 CAPLUS
DN 135:41772
TI Fluorophore-oligonucleotide-4-(phenyldiazenyl)phenylamine quencher conjugates for use in hybridization assays
IN Reed, Michael W.; Lukhtanov, Eugeny Alexander; Gall, Alexander A.; Dempcy, Robert O.
PA Epoch Biosciences, Inc., USA
SO PCT Int. Appl., 122 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 5

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001042505	A2	20010614	WO 2000-US33333	20001208
WO 2001042505	A3	20020124		
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6727356	B1	20040427	US 1999-457616	19991208
CA 2396795	AA	20010614	CA 2000-2396795	20001208
EP 1235938	A2	20020904	EP 2000-984069	20001208
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003516163	T2	20030513	JP 2001-544376	20001208
US 2002155484	A1	20021024	US 2002-93769	20020307
US 6699975	B2	20040302		
US 2004191796	A1	20040930	US 2003-606644	20030625
PRAI US 1999-457616	A	19991208		
WO 2000-US33333	W	20001208		
US 2002-93769	A3	20020307		

OS MARPAT 135:41772
AB Oligonucleotide-fluorophore-quencher conjugates wherein the fluorophore moiety has emission wavelengths in the range of about (300) to about (800) nm, and or where the quencher includes a substituted 4-(phenyldiazenyl)phenylamine structure provide improved signal to noise ratios and other advantageous characteristics in hybridization and related assays. The oligonucleotide-fluorophore-quencher conjugates can be synthesized by utilizing novel phosphoramidite reagents that incorporate the quencher moiety based on the substituted 4-(phenyldiazenyl)phenylamine structure, and or novel phosphoramidite reagents that incorporate a fluorophore moiety based on the substituted coumarin, substituted 7-hydroxy-3H-phenoxazin-3-one, or substituted 5,10-dihydro-10-[phenyl]pyrido[2,3-d;6,5-d']dipyrimidine-2,4,6,8-(1H,3H,7H,9H,10H)-tetrone structure. Oligonucleotide-fluorophore-quencher-minor groove binder conjugates including a pyrrolo[4,5-e]indolin-7-yl-carbonyl{pyrrolo[4,5-e]indolin-7-yl}carbonyl pyrrolo[,5-e]indoline-7-carboxylate (DPI3) moiety as the minor groove binder and the substituted 4-(phenyldiazenyl)phenylamine moiety as the quencher, were synthesized and have substantially improved hybridization and signal to noise ratio

properties.

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